

What is claimed is:

1. A screen comprising:

a mesh-like substrate; and

a titanium dioxide coating with photocatalytic activity provided on the mesh-like substrate.

2. The screen as claimed in claim 1, wherein the titanium dioxide coating includes titanium dioxide particles with an anatase crystal structure or a mixed crystal structure of anatase and rutile.

3. The screen as claimed in claim 2, wherein the titanium dioxide particles contain a mixed crystal structure of anatase and rutile and the ratio of anatase to rutile is 80:20.

4. The screen as claimed in claim 2, wherein the titanium dioxide particles are nanosize.

5. The screen as claimed in claim 1, wherein the mesh-like substrate is formed from a polymer material selected from the group consisting of nylon, poly vinyl chloride (PVC), polyethylene terephthalate (PET), polypropylene (PP) and poly butylene terephthalate (PBT).

6. The screen as claimed in claim 1, wherein the titanium dioxide coating comprises a buffer interface molecule having one end bonded to the titanium dioxide and the other end bonded to another ingredient of the titanium dioxide coating or the mesh-like substrate.

7. The screen as claimed in claim 6, wherein the buffer interface molecule contains at least one silicon atom for bonding with the titanium dioxide.

8. A screen comprising a mesh-like substrate including a plurality of titanium dioxide particles with photocatalytic activity.

9. The screen as claimed in claim 8, wherein the titanium dioxide particles contain an anatase crystal structure or a mixed crystal structure of anatase and rutile.

10. The screen as claimed in claim 9, wherein the titanium dioxide particles contain a mixed crystal structure of anatase and rutile and the ratio of anatase to rutile is 80:20.

11. The screen as claimed in claim 8, wherein the titanium dioxide particles are nanosize.

12. The screen as claimed in claim 8, wherein the mesh-like substrate is formed from a polymer material selected from the group consisting of nylon, poly vinyl chloride (PVC), polyethylene terephthalate (PET), polypropylene (PP) and poly butylene terephthalate (PBT).

13. The screen as claimed in claim 8, further comprising a buffer interface molecule having one end bonded to the titanium dioxide and the other end bonded to the mesh-like substrate.

14. The screen as claimed in claim 13, wherein the buffer interface molecule contains at least one silicon atom for bonding with the titanium dioxide.

5 15. A screen comprising:

a polyester mesh-like substrate; and

a plurality of polyurethane nanoparticles provided on the surface of the polyester mesh-like substrate.

10 16. The screen as claimed in claim 15, wherein the mesh-like substrate is made of polyethylene terephthalate.

17. A screen comprising:

a poly vinyl chloride (PVC) mesh-like substrate; and

a plurality of nanoparticles made of nylon 6-clay composite provided on the surface of the PVC mesh-like substrate.

15 18. The screen as claimed in claim 17, wherein the mesh-like substrate is formed from poly vinyl chloride (PVC).